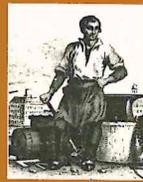


Industrial Heritage '84



New England



The Fifth International Conference
on the Conservation of the Industrial Heritage



Guidebook

Rhode Island & Southeastern Massachusetts Excursion

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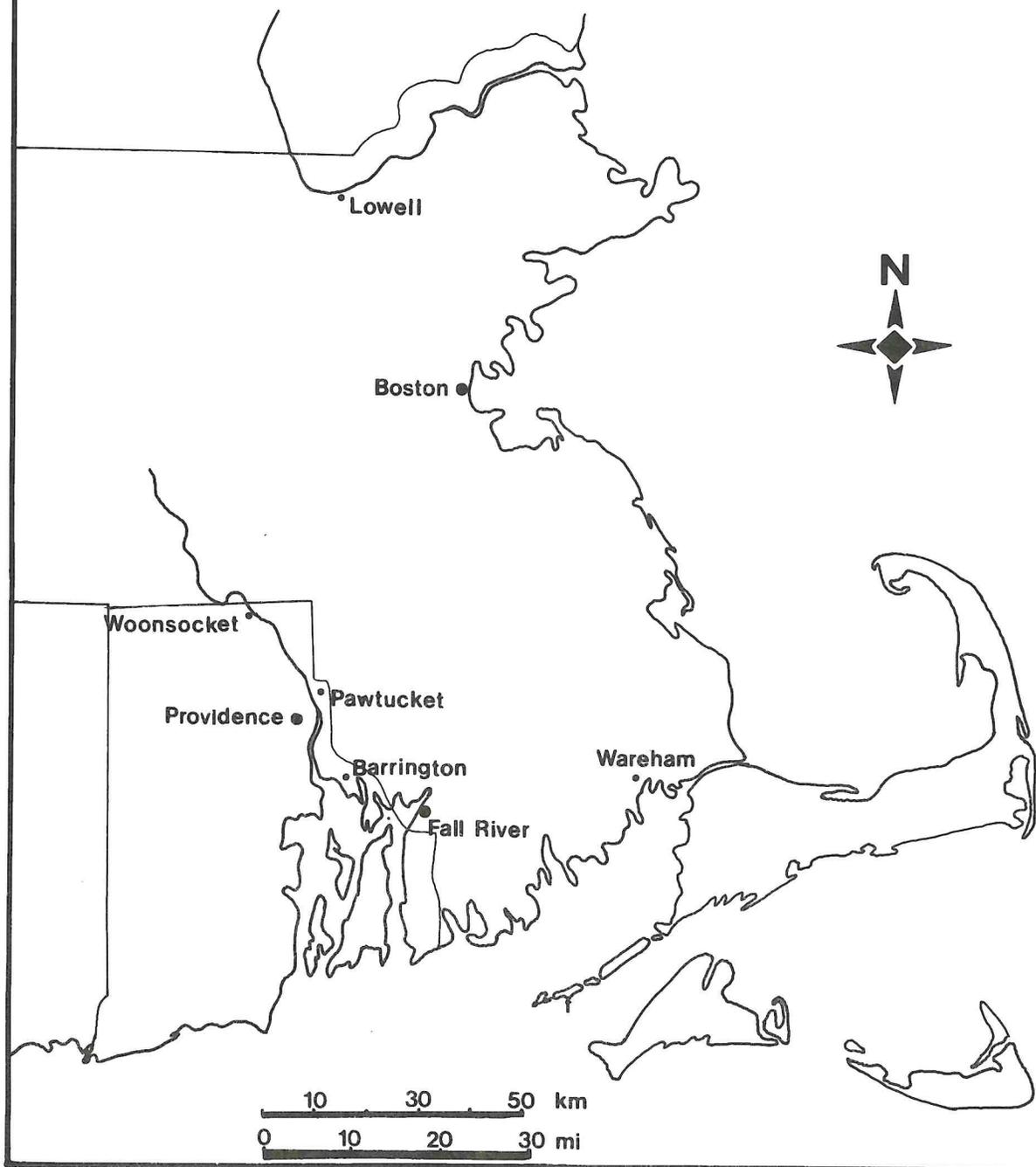
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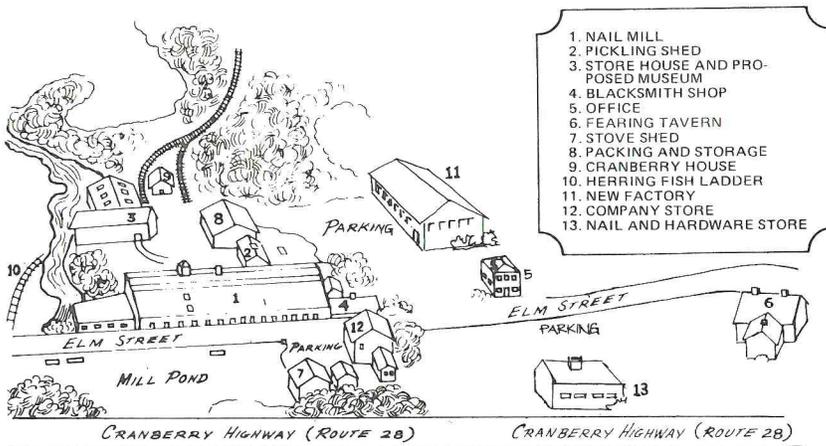
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Cover: Old Slater Mill, Wilkinson Mill and environs, 1870s.

SOUTHEASTERN NEW ENGLAND

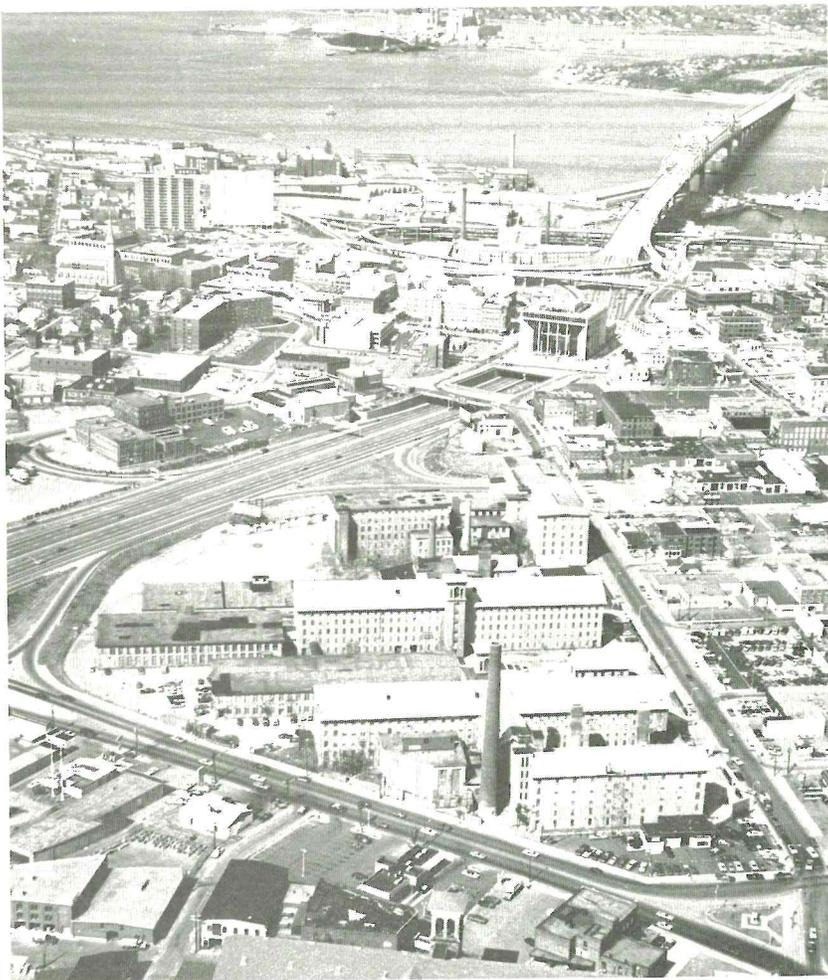




1. Tremont Nail Factory district.

1. TREMONT NAIL COMPANY (1848)
21 Elm Street
Wareham, MA.

The original nail manufactory on this water-powered site was the Parker Mills Nail Company. The present factory, built in 1848, contains about sixty nail machines, some dating to the 1870's. These machines cut nails from strip steel, the width of the strip determining the length of the nails. They also forge a head on each nail. Heat treatment hardens the cut nails, which have excellent holding power and durability. The site also includes a 19th century blacksmith shop and machine shop, both still in operation.



2. FALL RIVER, MA.

FALL RIVER is a child of the industrial revolution which was orphaned by subsequent patterns of capital redeployment. The city's visible heritage from that era includes a magnificent inventory of textile mills and a mosaic of diverse ethnic neighborhoods. Both its material environment and its intangible social history are products of two historically complex processes: the creation of a market economy and the diffusion of the factory system of commodity production. The convergence of these two trends altered the landscape and the character of daily life in Fall River during the 19th century. Today's legacy from those decades is the city's heaviest burden and its greatest potential challenge.

Neither merchant nor factory master played a significant role in the lives of local inhabitants when Fall River was set off in 1803 as a separate township named Troy. During the colonial period Fall River was no "City on a Hill" like John Winthrop's Boston; indeed, the hill behind Fall River's mediocre harbor proved so steep as to preclude widespread settlement. Down the slope and over a series of granite escarpments flowed the Quequechan River, outlet for the spring-fed Watuppa ponds. The short course of the river's descent into Mt. Hope Bay provided several admirable water power sites, utilized for sawmills and gristmills as early as 1703. Ownership of these various privileges and the abutting lands was concentrated in branches of the Borden family by 1714, a fact of major significance for the future. However, during the 18th century this river was not used for large-scale manufacturing. As of 1803 the routines of Fall River's approximately 100 inhabitants continued to be regulated by household production and local exchange or market relationships.

The potential power of the Quequechan was first tapped for mechanized cotton spinning during 1813-1814, the height of a domestic manufacturing boom. The appearance of the initial

2. Aerial View of Fall River, Durfee and Union Mills complex in foreground.

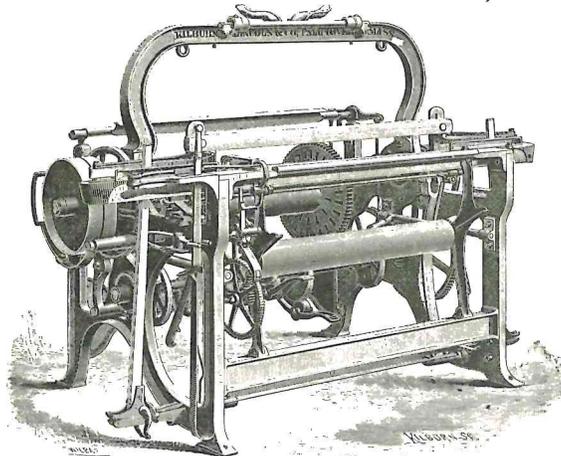
mills, the Fall River Manufactory and the Troy Cotton and Woollen Manufacturing Company, in the midst of the little village heralded the transformation of a township into the "Spindle City." Because Fall River became the single largest center, the history of its development is particularly significant.

The decisions that built up Fall River's industrial base during the first half of the 19th century were taken by a group of local investors having little true mercantile background; they were linked by the personal ties of kinship and marriage as well as the cash nexus of interlocking investments. This network of individuals built, operated, and leased out factories through two multi-functional developmental companies, the Pocasset Manufacturing Company and the Fall River Iron Works. Each of these umbrella organizations was founded in 1821; both made use of water power sites controlled by participating descendants of the Borden family. The Pocasset and Iron Works interests also collaborated to establish the Watuppa Reservoir Company (1826) which controlled the water powering the procession of mills down the Quequechan. In the early Fall River factories, personal management by the proprietors, rather than by salaried bureaucratic management, was the ruling practice. The largely native-born workforce consisted of both families (including children related to the owners) and single individuals such as Sarah Maria Cornell, a weaver whose alleged murder by a Methodist minister in 1832 scandalized the community. Since the development companies possessed no central machine-making facilities of their own, local textile machinists enjoying symbiotic relationships with the extended-kinship interest groups equipped the majority of mills that were set up during the second quarter of the 19th century. Fall River eventually became the base for major shops in the regionally-significant textile machinery industry: Hawes, Marvel & Davol began constructing Sharp & Roberts self-acting mules in 1841 following a classic act of industrial espionage in England; Kilburn, Lincoln specialized in looms and hydraulic turbines. This particular combination of ownership, management, labor organization, technology, and community development was peculiar to Fall River and distinguishes its history from that of other cities and villages shaped by capital from Boston or Providence. As a result of its multifarious projects, the Fall River Iron Works became the dominant economic institution in the city during the years prior to 1860, promoting one local historian to remark that "this corporate Briareus, with the brain of Mercury, for nearly four decades, seemed to hold the growing town and city, with all its industries and enterprises, in its hundred arms."

An explosive burst of mill construction during the late 1860s and early 1870s laid the basis for the shape of the city as it appears today. Rather than acting through the developmental companies, a new technique of capital mobilization through private share subscriptions facilitated the proliferation of cotton factories: the scheme was first employed for floating the Union Mills in 1859. Steam engines, which had been introduced during the early

Kilburn, Lincoln & Co.,

FALL RIVER, MASS.



The Seaconnet Mills, Fall River, wove in 301 days of 10 hours each, 14,329,219 yards of 64 x 64 goods on 928 of our "New High Speed Looms," a daily average of 51 3-10 yards per loom per day.

LOOMS

FOR
Cotton and Silk
Weaving.

1840s, freed factories from dependence on the finite power of the Quequechan. Proximity to transport facilities and sources of boiler feed or process water now determined the location of factory sites. Clusters of new mills and associated worker housing spread out to the north, south, and east forming self-contained settlements that were, in turn, enveloped by the expanding city. The numerous factories built during the period 1865-1900 are the most prominent examples of industrial architecture standing in present-day Fall River. Constructed of locally-quarried granite or of brick (used mainly at sites along the waterfront) these handsome structures remain a major resource in the city to which they once gave life.

Even a cursory examination of the historical record, of course, renders it impossible to romanticize the every-day life associated with Fall River's textile mills. The human counterpart to the city's architectural heritage is the succession of ethnic groups who came here to work and put down roots: English, Irish, French-Canadians, and Portuguese were the most numerous but by no means the only immigrants. Fall River workers asserted themselves in a series of strikes that gave the city a prominent place in American labor history: 1841 (block printers), 1848 (weavers), 1850 (spinners), 1868 (spinners and weavers), 1870 (spinners) 1875 "The Long Vacation", 1879 (spinners), 1884, 1889, 1894, 1904 (United Textile Workers)—to list only the major episodes. Amid this turmoil Massachusetts state officials mounted an early social science investigation addressed to the question "Why is it that the working people of Fall River are in constant turmoil, when at Lowell and Lawrence they are quiet?" The primary cause seems to have been the presence at that time of numerous immigrants who had gained trade union experience in the Lancashire textile industry. Even after the decline of Fall River's mills, the memories of people today

2. Kilburn, Lincoln & Co. advertisement, 1891.

still represent a living archive of the meaning of the industrial experience in human terms.

During the years between the two world wars, Fall River's cotton industry was decimated by a wave of disinvestment. Between 1924 and 1939 seventy-five per cent of its textile capacity--once in excess of 3.9 million spindles--was liquidated; the city itself plunged into municipal bankruptcy. As of 1920 the mills had supported 32,300 jobs; in 1980 textile employment stood at 4,000, mostly in dyeing, finishing, and synthetics (cotton fabric production ended in 1965). Garment manufacturers have occupied some of the mills; others house commercial outlets; a few have been renovated for housing or retail operations. The city has made a Carthaginian peace with the automobile at the cost of burying the Quequechan (and some of the oldest mill sites) under I-195 while other highway construction has quarantined portions of the waterfront. Fire has obliterated such landmarks as the Richard Borden mill (1873), once described as "one of the most perfect structures for manufacturing purposes in this country." Nevertheless, vital portions of the local industrial heritage remain intact. The energy now being mobilized by public officials, private investors, and neighborhood groups may blend these resources bequeathed from the past into a wider vision of promise for a revitalized Fall River.

3. FALL RIVER HERITAGE STATE PARK - VISITORS' CENTER
Battleship Cove
Fall River, MA.

The Heritage State Park system, developed by the Massachusetts Department of Environmental Management, represents an effort to interpret the industrial heritage of the state and to form a basis for the revitalization of its historic cities. A cooperative effort between the Commonwealth and the cities, each park is planned as a stimulus for tourism and greater private investment and as a way to celebrate the histories of these cities and their people. The Massachusetts initiative is the country's first such state-wide system.

Each park has its own interpretive themes reflecting the industrial past of its community. A Visitor Center provides a location and ori-

entation for programs and activities related to the park's themes. The Fall River Visitor Center offers a multi-image slide presentation on the world-renowned textile industry of the city. It also has available information on walking tours to explore the mills and ethnic neighborhoods that grew up around them as well as on Battleship Cove and the Marine Museum, both nearby.

4. FALL RIVER IRON WORKS (1889 et seq.)
Anawan/Water Streets
Fall River, MA

Series of steam-powered brick textile mills erected by M.D.C. Borden to supply print cloth for his nearby American Printing Company. Significant portions of print works complex now demolished. Major structures once located in the area which Borden razed in the course of late 19th and early 20th century expansion include the original Fall River Iron Works (a rolling mill and nail factory) and the Fall River Machine Company, successor to Hawes, Marvel & Davol.

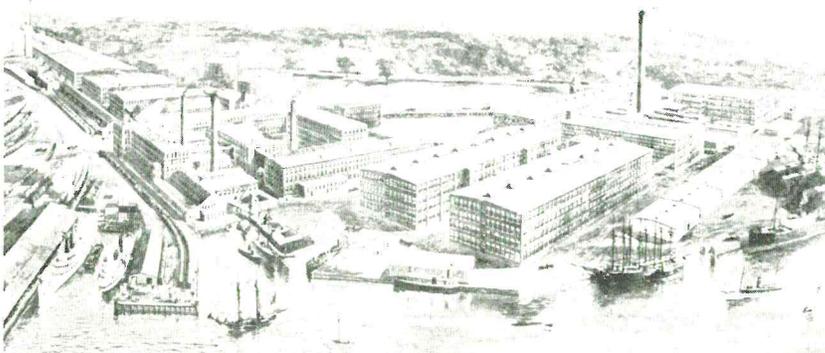
5. METACOMET MILL (1847)
Anawan/Canal Streets
Fall River, MA.

Fall River's oldest extant textile mill, now encircled by expressway tentacles. Originally located on a water power site, the lowest of the 8 falls on the Quequechan River; later supplemented with steam. Initial dimensions 218' x 70' (66.45 m. x 21.34 m.), 5 1/2 stories, stone construction. Unusual width inspired by contemporary English practice. Interior framing features cast iron columns. Alterations and additions include raising the roof to low pitch, thus providing full 6th story. Adjoining buttressed brick mill with gothic powerhouse constructed 1905-1906 by Fall River Iron Works. Now occupied by clothing outlet.

6. DURFEE MILLS (1866-1904)/UNION MILLS (1859-1860, 1865)
Pleasant Street/Plymouth Avenue/
I-195, #12
Fall River, MA.

Durfee Mills, largest stone complex in Fall River, remain substantially intact. Principal structures include #1 and #2 Mills, each 376' x 72' (114.6 m. x 21.95 m.) and 5 1/2 stories, and #3 Mill, 127' x 44' (38.71 m. x 13.41 m.), with 5 1/2 stories. Two and one-half story office building, 63' x 40' (19.2 m. x 12.19 m.), has attic floor hung from roof truss. All three mills retain original gable roofs. Mule spinning replaced with frames beginning c.1885. Complex now being renovated for retail space. Neighboring Union Mills the first in Fall River to be floated by private share subscription and the third to be powered by steam. Original gable roofs removed when attic stories raised after 1876.

4. Fall River Iron Works / American Print Works.



7. DAVOL MILLS (1867-1871)
Plymouth Avenue/Rodman Street
Fall River, MA.

L-shaped brick cotton mill with mansard roof, the last of its type remaining in Fall River.

8. ROBESON MILL (1866-1867)
Rodman/Hartwell Streets
Fall River, MA.

Romanesque brick cotton mill with tie rods. Original "French roof" absent and semi-octagonal central tower modified. Plant later enlarged at various times, including after acquisition by Luther Manufacturing Company in 1903.

9. TECUMSEH MILL #1 (1866)
Hartwell Street/opposite Brow Street
Fall River, MA.

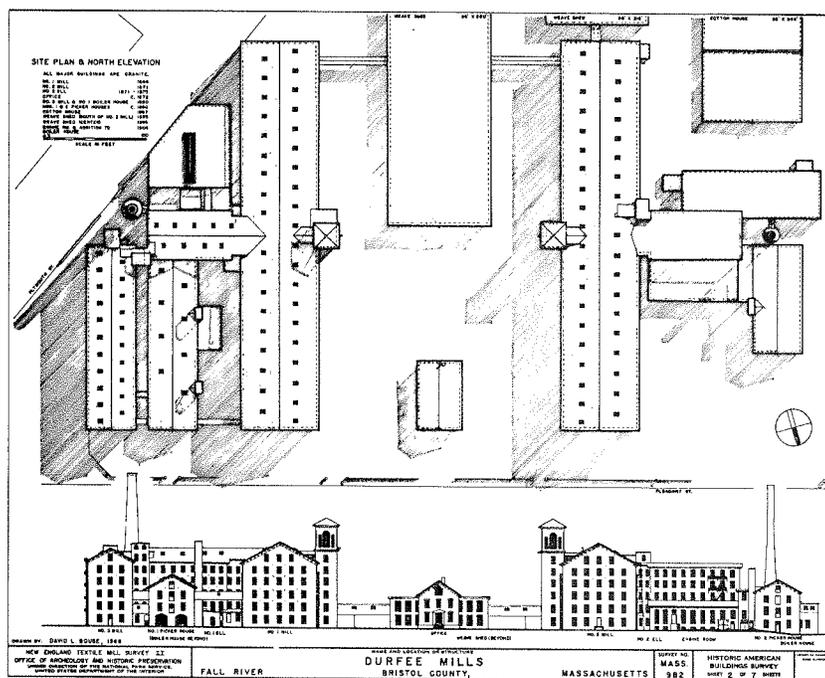
Stone mill with gable roof and tie rods. Now rehabilitated as part of housing complex.

10. RHODE ISLAND AND THE CITY OF PROVIDENCE

Rhode Island, one of 19th-century America's most important industrial states, was dominated by the textile industry. From its origins in Pawtucket in 1790, the industry fanned out along the state's river valleys. The Blackstone River became probably the most utilized waterpower source in America; out of a total drop of 430 feet (131 m.), over 400 feet (122 m.) were used to drive water wheels or turbines in a series of communities. Even after the widespread use of steam power for manufacturing, the water-powered textile mill remained the industry's most common form throughout the century. Despite the flight of most of the state's textile mills to the South from the 1930s through 1955, numerous mill buildings, dams, power canals, and mill villages survived to find new uses. The Rhode Island landscape contains hundreds of former textile mills, many of which continue to evoke the nature and scale of 19th-century industrial life.

The state still has a small but vibrant textile industry which has found the key to survival through specialization. Fabric printing and the production of webbing, braid, knitwear, and lace are among the most successful enterprises. There are also a few firms which continue to build textile machinery, carrying on a tradition which goes back to David Wilkinson and his Pawtucket machine shop.

Providence, the state capitol, had a large number of textile mills which made cotton, woolen, and worsted goods, but this city was also a great manufacturer of metal products. Between 1850 and 1860, the number of metal working firms in Providence grew from twenty-five to ninety-four, while the industry's capital base increased from \$474,000 to \$2,977,000. Only Pawtucket, with numerous small shops, was a rival, but Providence far exceeded Pawtucket in amount of capital, number of workers, and value



of production. Steam engines, machine tools, textile machinery, screws, files, and jewelry were Providence's primary products. This growth was the result of Providence's central location for the receipt of raw materials and the transport of finished goods by both sea and rail, and the spin-off effects of the textile industry, both in its demand for machinery and steam engines, requiring ever more versatile and complex machine tools, and in its creation of learning opportunities for skilled machinists and metal-workers.

Steam engines provided the motive power for most of these metal-working firms, and the construction of steam engines became a critically important part of Providence's economy. The business began on a significant scale in the early 1820s through the work of Robert Thurston and John Babcock. Located in the Fox Point section of Providence, Thurston and Babcock's firm, later incorporated as the Providence Steam Engine Company was the state's leading producer of steam engines in the early 19th century. By the mid-19th century, however, it was displaced as the state's most important steam engine company by the Corliss Works, incorporated in 1856. George Corliss was the internationally-known inventor of the Corliss valve-system, a steam engine improvement which greatly increased the efficiency of engine operation. The establishment of the Corliss Works made Rhode Island the nation's leader in the building of steam engines. With the exception of the Nichols & Langworthy Company of Hope Valley, all the state's important engine works were located in Providence.

The machine tool industry formed another important sector of the city's economy. Brown & Sharpe, incorporated in 1863, was the city's major machine tool company. In the 1860s, the

6. Durfee Mills.

company achieved a national reputation as the inventor and producer of a series of critical machine tools, most importantly, the Universal Miller and the Universal Grinder. Brown & Sharpe also produced important measuring devices, the vernier and micrometer calipers, which greatly increased the ability of machinists to do precise and replicable work. The company's large Providence plant, once considered a model of machine shop construction, continues to survive in the shadow of the State House, though no longer used for the manufacture of machine tools.

Textile machinery continued to be an important product in Providence throughout the 19th century, and many of the city's machine shops continue to stand. Thomas J. Hill's Providence Machine Company (1846) specialized in English-pattern fly-frames, and the Phenix Iron Foundry (1848) built machinery for dye houses, bleacheries, and print works. The New England Butt Company, incorporated in 1842, manufactured braiding machines, along with assorted hardware and castings, and the City Machine Company (1868) built looms and loom accessories. The Providence shops, in company with Fales & Jenks of Pawtucket, James Brown of Pawtucket, Woonsocket Machine & Press and, in the late 19th century, Universal Winding of Cranston, formed a critical part of the country's textile machinery business.

Numerous other base-metal companies performed a variety of productive tasks. Among the most important were the Nicholson File Company, incorporated in 1864, a huge file-making firm with plants in Providence and Pawtucket as well as outside the state, and the massive American Screw Company, incorporated in 1860 in a merger of two earlier screw-making firms. Other important companies were the Rhode Island Locomotive Works (1865), the Providence Tool Company (1845), and the Fuller Iron Works (1869). All of these firms have structures which continue to stand.

Providence's jewelry industry has become the city's largest industrial sector. A number of small jewelry shops were located in Providence as early as the late 18th century, most devoted to inexpensive consumer items. The one major producer of high quality jewelry, flatware, and statuary was the company founded by Jabez Gorham in the early 19th century. The Gorham Manufacturing Company, still in operation, grew to substantial size during the 1860s, expanded again in the 1890s and continued its manufacture of luxury items in silver, gold, bronze, and brass. The bulk of the industry, however, remained committed to less expensive goods. From eighty-six establishments in 1860, the Providence jewelry industry grew to 296 plants by 1910. Some of these firms built substantial, multi-story, brick buildings in the Chestnut Street area of the city which continue to survive. This area still forms an important core of the state's jewelry industry, though increasing numbers of firms are now located in Pawtucket, Central Falls, Cranston, and Warren. Local jewelry firms also spurred the growth of the jewelry-findings manufacture, largely located in the Providence-Pawtucket area in the

late 19th century, which provided the industry with the pin stems, catches, and assorted hardware necessary to the trade.

The existence of a diverse metals industry gave Providence an economic cushion denied to the textile towns of Woonsocket, Central Falls, and the numerous textile mill villages throughout the state. Though only the jewelry industry has maintained its strength to the present, Providence's industrial diversity enabled it to survive the fluctuations of the volatile textile industry and to maintain an industrial base after the bulk of the state's textile mills either closed or moved South.

(Above material on Providence from Gary Kulik and Julia C. Bonham, Rhode Island, An Inventory of Historic Engineering and Industrial Sites (Washington, DC. 1978), pp. 13-15.)

11. SALVADORE TOOL & FINDINGS INC.
369 Fountain Street
Providence, R.I.

This established firm makes high quality metal stampings for both domestic and international manufacturers of jewelry. Using a combination of hand craftsmanship and the most modern technology, Salvadore Tool has built an impressive reputation in the jewelry industry.

12. FACULTY CLUB OF BROWN UNIVERSITY
One Megee Street
Providence, R.I.

The faculty Club is the c. 1861 house of Zachariah Allen, an industrialist and mill engineer who founded the Factory Mutuals to provide insurance for mill owners and to promote standards for fire prevention.

13. RHODE ISLAND LACE WORKS (1904)
Bay Spring Avenue
Barrington, R.I.

Rhode Island Lace Works began as a small complex of wooden buildings in 1904. Design, drafting, weaving (actually a twisting process), and finishing have always been done in the plant. Leavers lace was, and still is, produced by huge English lace machines weighing up to twenty-six tons, with some 40,000 parts. The "twist hand" operates a single machine, the largest and most complex in the textile industry. The 1904 weaving mill with its original machines, the dye house, and the boiler house are still in use, but many other structures have been added. A two-story, reinforced-concrete mill, 397 feet (121.01 m.) long, was built in 1920 with a second floor of flat slab construction on mushroom, or flaring, columns. The gypsum roof is supported by steel girder Pratt trusses. In 1948, a much smaller brick and concrete building was added for a process in which acetone is used to dissolve acetate threads that hold the bands of lace together in a "web". Until the late 1930s, lace webs were

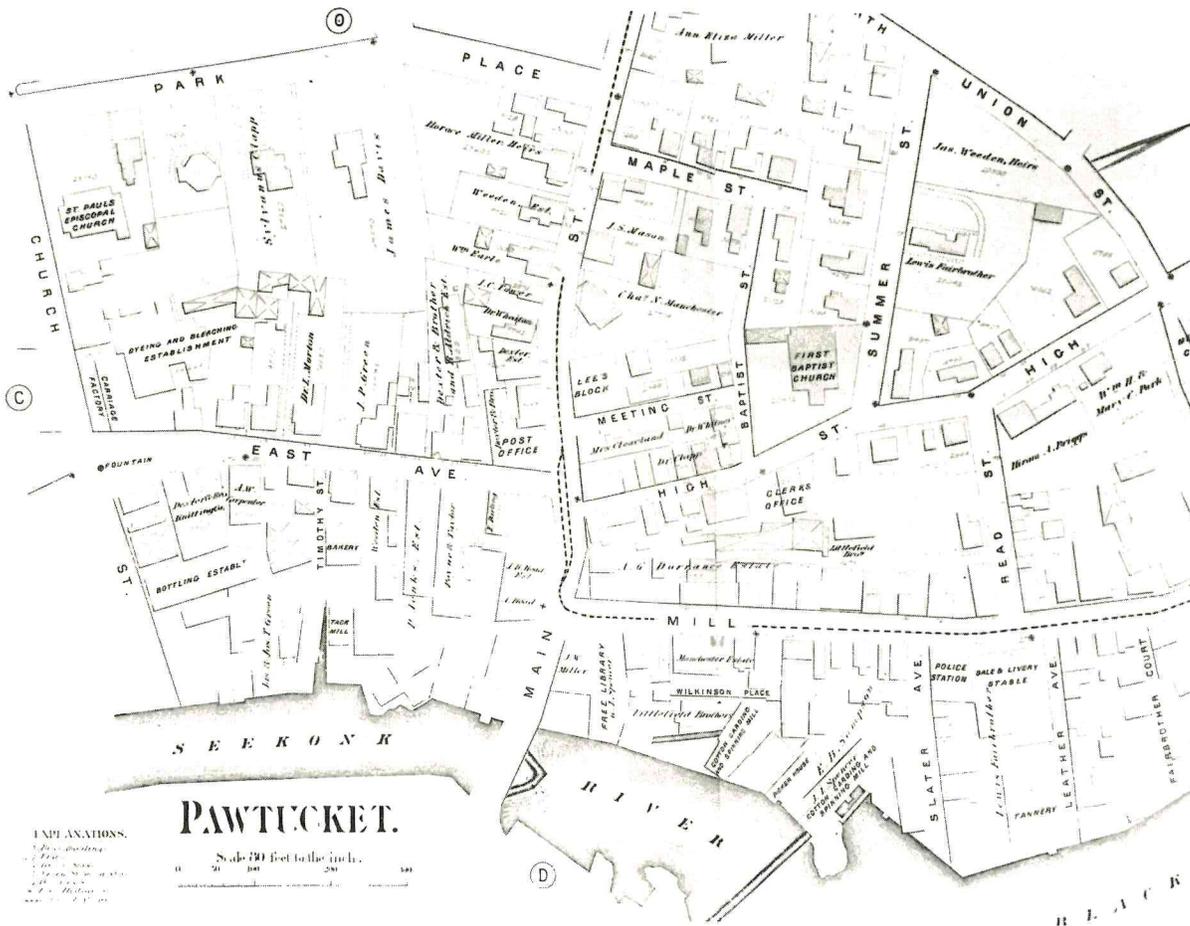
delivered to local families who pulled the draw threads. The thirty-nine lace machines in the complex vary in date of manufacture, but all but two were made by Jardine of Nottingham.

14. SLATER MILL HISTORIC SITE
 Roosevelt Avenue near Main Street
 Pawtucket, R.I.
 PAWTUCKET, R.I.

The Old Slater Mill (1793) is the oldest textile mill in North America. It was first run by Samuel Slater, who brought knowledge of the Arkwright cotton spinning process from England. The Wilkinson Mill (1810) is a stone textile mill and machine shop built by Oziel Wilkinson and operated by his son David, the American inventor of the slide-rest, screw-cutting lathe. The Sylvanus Brown House was the home of a pattern maker/millwright who worked with Wilkinson and Slater on the Arkwright machinery. Both mills on the site were powered by water power created by the nearby Slater Mill Dam, first erected in 1793 and rebuilt c. 1850. Today water still runs through the Great Flume to drive a reconstructed 16,000 pound (7264 kg.) breast wheel in the Wilkinson Mill.

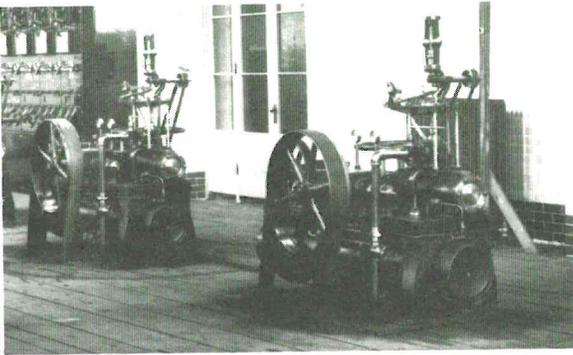


14. Old Slater Mill, 1949.



14. Map of Old Slater Mill, Wilkinson Mill and environs, 1880.

15. Lombard governors at Bridge Mill Power Plant.



15. THE BRIDGE MILL POWER PLANT (1896)
Main Street at Main Street Bridge
Pawtucket, R.I.

Opened in 1896 to generate direct current for steel railways, the Bridge Mill Power Plant ran on water power, steam power, or both. Shedd and Sarle, engineers, worked with Stone, Carpenter, and Wilson, architects, to design this unusual brick station. The building contained a gate house, power house, and boiler house (the latter enlarged by 1904). Five pairs of 33" (.83 m.) McCormick turbines, controlled by Lombard Governors, and two Westinghouse compound automatic steam engines ran five 150 KW DC generators. On a 17 foot (5.18 m.) fall and with a 130 foot (39.6 m.) long, 17 1/2 inch (.44 m.) diameter brick penstock, the turbines could produce up to 1300 H.P. (969 w.); the final drop of the Blackstone River varies with the tide. Between 1901 and 1916, the plant was converted to alternating current and the original engines replaced by three McIntosh and Seymour 780 H.P. (582 w.) vertical cross compounds. All steam power ceased by 1922, but the Blackstone Valley Electric Company (BVE) continued to operate with water turbines until 1969.

The plant is reopening in 1984 with two General Electric 850 KW turbine-generator units. BVE has preserved one of the old turbines, five 200 KW AC generators, and five Lombard Governors for an exhibit in the building.

16. Pawtucket Hair Cloth Mill.

16. PAWTUCKET HAIR CLOTH MILL (1864)
Roosevelt Avenue at Central Avenue
Central Falls, R.I.

Brick mill built for the Pawtucket Hair Cloth Company, the major producer of hair cloth (black cotton warp and horsehair filling) in the United States. Site of the first large-scale use of Isaac C. Lindsley's automatic feeder (1861 patent), which allowed the adaptation of the power loom to hair cloth weaving.

17. KENNEDY/STAFFORD MILL (1824)
561 Roosevelt Avenue
Central Falls, R.I.

John Kennedy, in conjunction with Almy and Brown, Samuel Slater's partners, built this brick mill for the manufacture of cotton cloth. The four-story mill with its end tower and clerestory monitor (since covered over) is one of the oldest brick mills in New England. It was enlarged in the 1860s when it housed the Stafford Manufacturing Company, producers of cotton yarn.

18. FALES AND JENKS/UNITED STATES COTTON COMPANY (1861-1863)
27 Foundry Street
Central Falls, R.I.

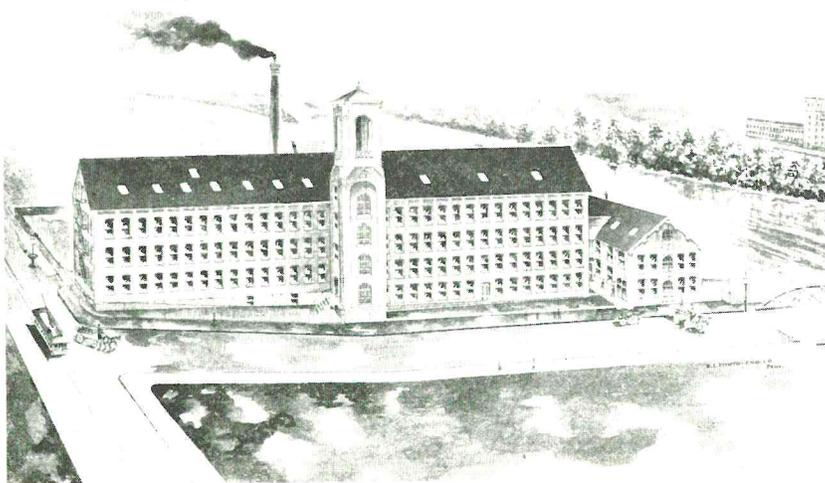
This mill originally served as the machine shop for Fales and Jenks, the important textile machinery firm. One of the first to produce ring spinning frames (1845-46), they also manufactured the Rabbeth spindle, the first high-speed, self-centering spindle. After Fales and Jenks moved to a large complex in Pawtucket, the A. and W. Sprague Company and then the U.S. Cotton Cloth Company used the building as a cotton mill.

19. VALLEY FALLS MILL (1849)
SE side of Broad Street Bridge
Central Falls, R.I.

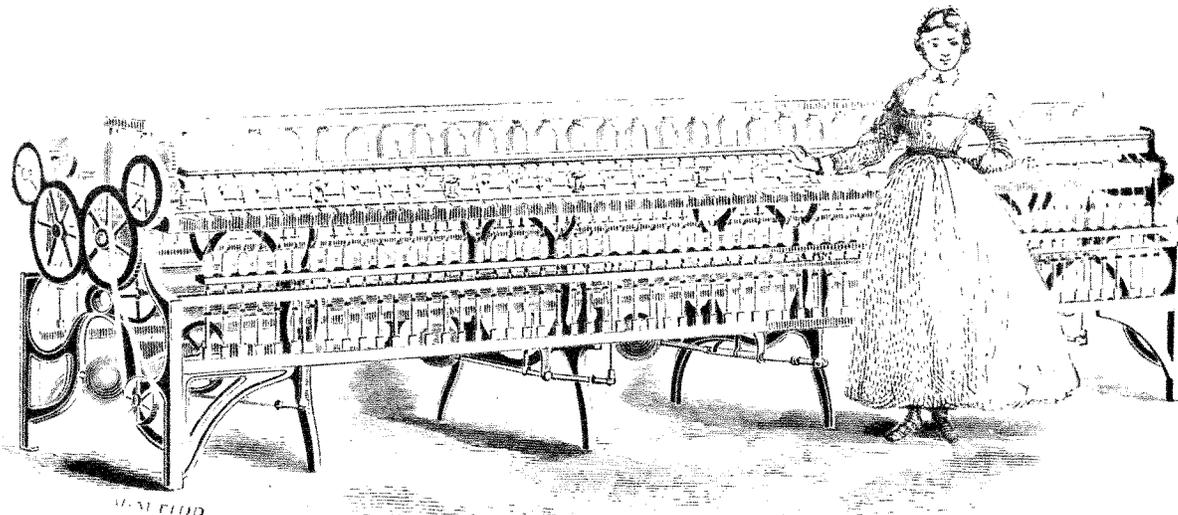
This 4-story brick mill, built in 1849, saw the first use of American-made, Sharp & Roberts patent, self-actor spinning mules. It is now an elderly housing complex with a modern hydro-electric installation. The dam and gatehouse date to 1853.

20. CHURCH HILL INDUSTRIAL DISTRICT
Pawtucket, R.I.

The district includes SLATER COTTON COMPANY MILL (1863-1882, with later additions, Church Street at Pine Street), originally built as a file factory, subsequently a major producer of twill, sateens and fine quality bleached cotton cloth; JAMES S. BROWN MACHINE SHOP (1847-1848, 483 Main Street), small textile machine shop operated by the inventive son of Sylvanus Brown (see Slater Mill Historic Site); CAMPBELL MACHINE SHOP (1888-1889, 21 Commerce Street), produced the Campbell lock-stitch wax-thread



18. Fales and Jenks ring spinning frame, 1867.



sewing machine; WILLIAM HASKELL MANUFACTURING COMPANY (c. 1860-1920, Main and Commerce Streets), said to be the oldest continually-operating bolt and cold-punched nut plant in the U.S.; UNION WADDING COMPANY (1847-1870 and later, 125 Goff Avenue), acclaimed as the largest cotton batting plant in the world in the late 19th century, still operating.

are still intact. On the site's western edge runs a portion of the Blackstone Canal (see No. 26), converted to a power canal. To the north stands the Lonsdale Railroad Bridge and Dam (1893-1894).

21. CONANT THREAD/COATS AND CLARK MILLS (1869-1919)
Pine, Conant, and Carpenter Streets
Pawtucket, R.I.

Multi-structure complex with six production buildings for cotton thread-making. In its time, one of the largest thread complexes in the country, now the largest textile mill site in the state—especially well-preserved. Presently occupied by industrial tenants.

22. SAYLES BLEACHERY (1854 and later)
Walker Street at Route 126
Lincoln, R.I.

Massive textile bleachery complex, largest in the world in the 19th century, capable of turning out 3000 pounds (1362 kg.) of bleached cotton goods per day. Owned by the prominent Sayles family (who were also associated with the Slater Cotton Company), this was the site of a famous 1934 textile strike. Now an industrial park.

23. LONSDALE MILLS AND VILLAGE (1833-1901)
Cook Street
Lincoln, R.I.

Site of early 19th-century complex of cotton mills and bleachery owned by the Providence firm of Brown & Ives, now greatly altered and occupied by industrial tenants. However, many early 19th-century brick and wood-frame mill houses

20. James Brown Machine Shop advertisement, 1881.

JAMES BROWN,

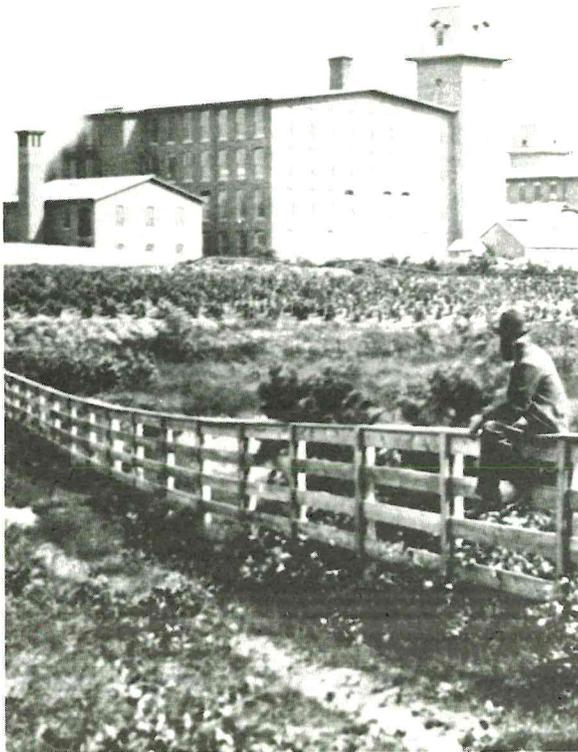
Successor to James S. Brown,
Manufacturer of

COTTON MACHINERY,

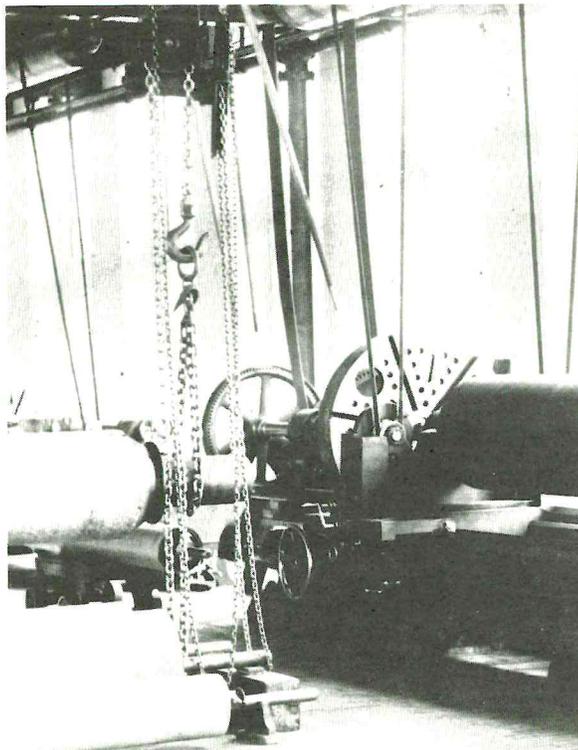
SPINDLES & GRAY IRON CASTINGS.
IMPROVED ENGLISH PARR MULE,
From 1 $\frac{3}{8}$ to 1 $\frac{1}{2}$ Gauges.
SPEEDERS, BALL WINDING MACHINES, for Baling Twine, Cotton or Wool
Yarns, Silk, Etc., Etc.
I AM MAKING PREPARATIONS TO BUILD WET OR DRY TWISTERS.

287 MAIN ST., PAWTUCKET, R. I.

21. Conant Thread Mills, 1870.



22. Sayles Bleachery, Machine shop.



24. ANN & HOPE MILL (1886-1901) AND NEW VILLAGE, LONSDALE (1861 and later)
1 Mill Street
Cumberland, R.I.

This large brick steam-powered cotton mill, 498' (151.8 m.) long, with a later addition, was known as the largest textile mill in New England at the time. Built for the Goddard Brothers, successors to Brown & Ives, it is now a discount store. The mid to late 19th-century brick housing for mill workers is well-preserved.

25. BERKELEY MILL (1872)
Berkeley Village
Cumberland, R.I.

Steam-powered brick mill used by Goddard Brothers for high-quality cotton goods, associated brick housing located on the hill above. Now used as a warehouse, the Berkeley Mill is listed on the National Register of Historic Places, chiefly for its restrained Romanesque architecture.

26. BLACKSTONE CANAL (1824-1828)
Ashton to Scott Pond, west bank of
Blackstone River
Lincoln, R.I.

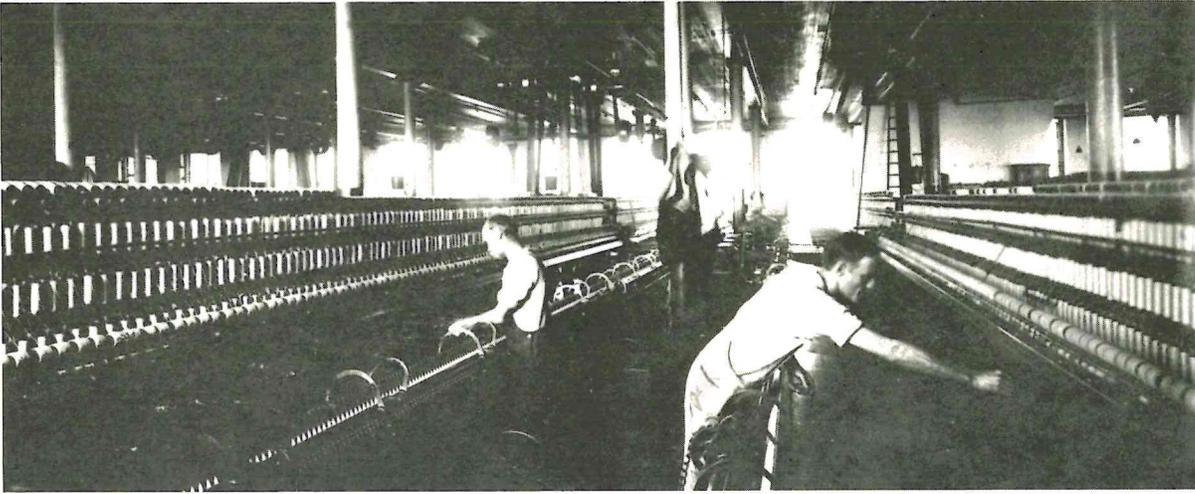
The longest surviving section (four and a half miles or seven and a quarter km) of the forty-five mile-long (72.4 km) canal built between Providence and Worcester, Massachusetts. Promoted principally by Providence merchants, the canal company was forced into a long and unsuccessful battle with manufacturers on the Blackstone River over water rights. The construction of the Boston and Worcester Railroad (1835) and the Providence and Worcester Railroad (1847) marked the end of the canal's active career, although portions of the canal were converted to power canals for mills along the route.

27. ASHTON MILL AND VILLAGE (1867)
Cumberland, R.I.

Another Goddard Brothers' mill for fine cotton goods, site of the first large-scale test of the Sawyer high-speed spindle. Up until recently occupied by a fiberglass firm, roof line and windows altered. Adjacent mill housing is well preserved.

28. ASHTON VIADUCT (1934-1945)
George Washington Highway
Cumberland and Lincoln, R.I.

This five-span, open-spandrel, reinforced concrete arch bridge, the largest of its type in the state, carries the George Washington Highway over the Blackstone River. Designed by Samuel A. Engdahl, the bridge is 925' (281.9 m.) long and the main span rises 160' (48.77 m.).



23. Lonsdale Mills,
mule room, 1912.
Photo by Lewis Hine.

29. FORESTDALE VILLAGE (1824, 1860)
North Smithfield, R.I.

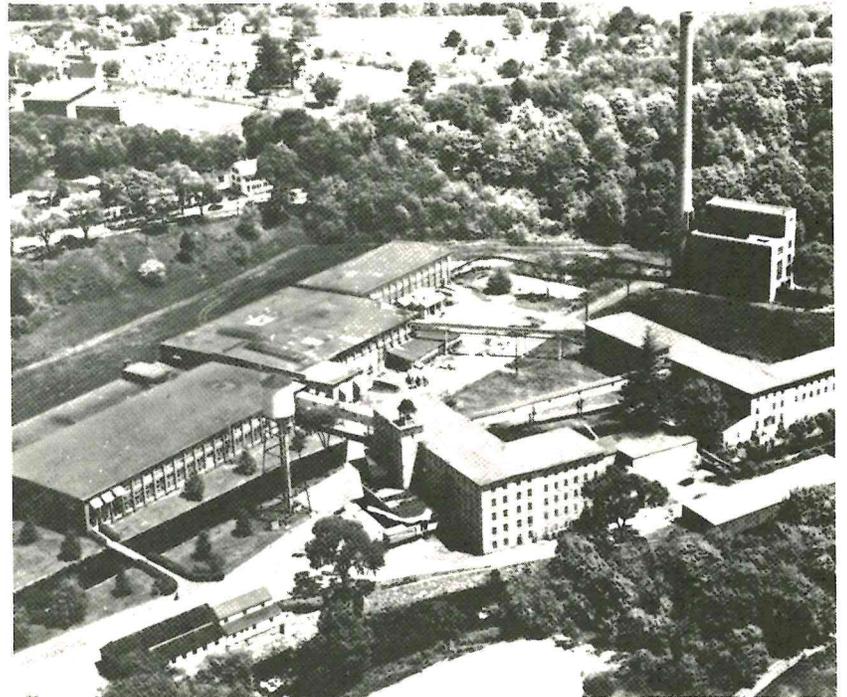
The village contains well-preserved Greek revival workers housing and company store. Activity began on the site in 1824 with the erection of Darling's scythe works. By 1860, the works were producing 168,000 scythes annually. The construction of a large cotton mill in the following year marked the gradual decline of the edge tool operation. Scythe works demolished and cotton mill burned recently.

30. SLATERSVILLE HISTORIC DISTRICT (1806-1894)
North Smithfield, R.I.

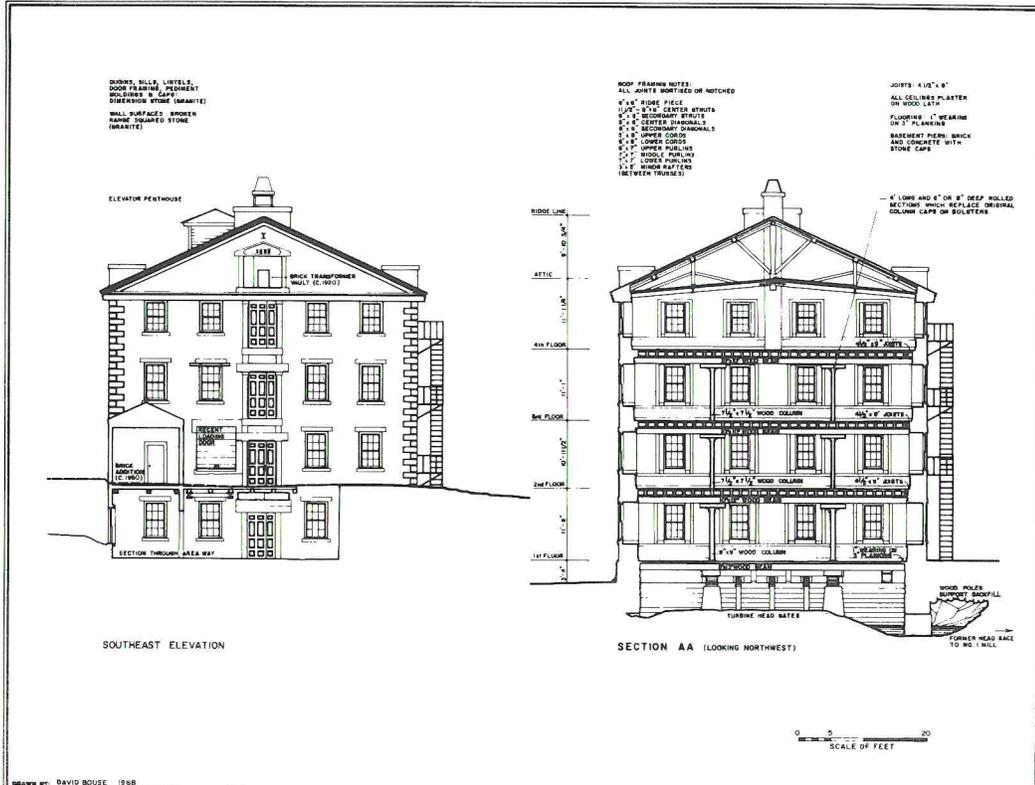
One of the earliest planned textile mill villages, Slatersville contains the SLATERSVILLE MILLS; the current wooden office may date from 1806-1807 when John Slater, Samuel's brother, first built here. The four-story main mill, built in 1826, has an altered roof line and tower. Other mill buildings, 1843-1894. Slightly altered housing facing the green are the earliest workers housing in the state. Site also contains three dams and two power canals, built between 1806 and 1872; and a stone arch bridge, 1855. National Register of Historic Places.

31. BALLOU MILL/LIPPITT WOOLEN MILL (1836-1871)
Main and Bernon Streets
Woonsocket, R.I.

Stone Ballou Mill has wooden Greek Revival tower. Lippitt Mill (1870-1871) is a distinctive brick mill with a mansard roof. Both owned by the Lippitt Company after 1865. Running in front of the Ballou Mill is a part of the LYMAN-ARNOLD TRENCH (c. 1827), a power canal used for a number of separate mills.



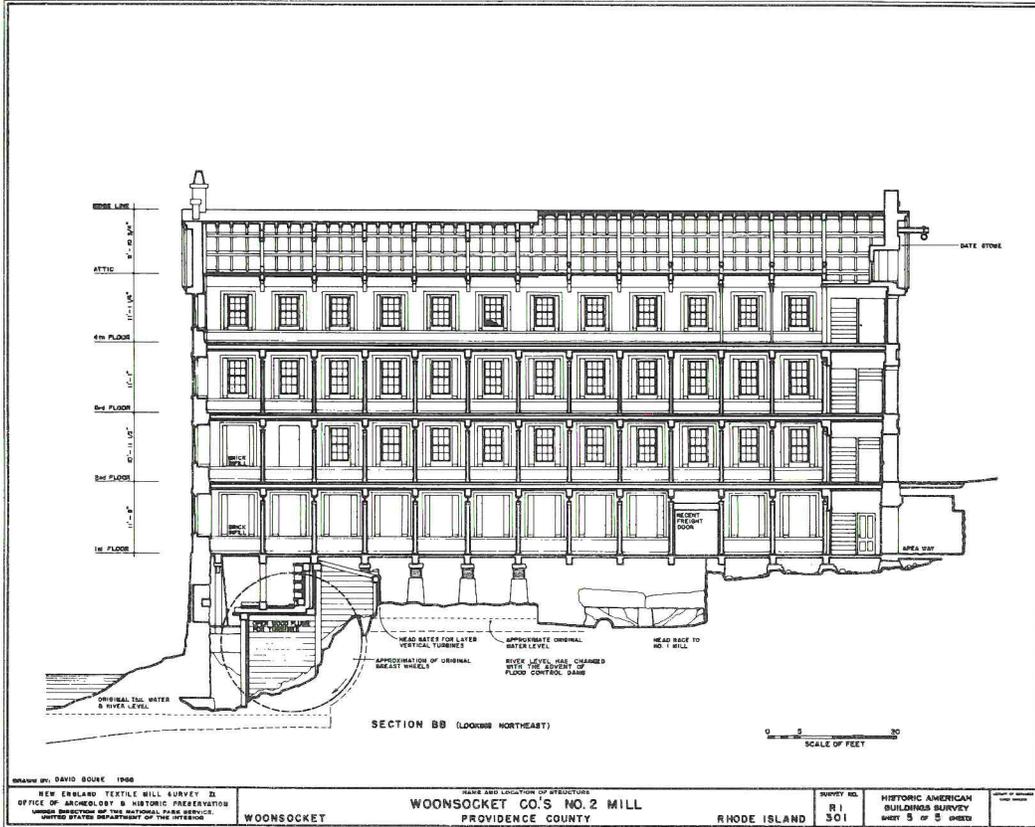
30. Slatersville
Mills, ca. 1940.



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 OFFICE OF ARCHAEOLOGY & HISTORIC PRESERVATION
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WOONSOCKET CO'S NO. 2 MILL
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-
32. BERNON MILLS (1827-1859)
100-115 Front Street
Woonsocket, R.I.

Three stone textile mills; No. 1, three stories with clerestory monitor, 1827; No. 2, four-story mill with striking Greek Revival details, 1833; No. 4, stone mill with dormers, 1859. The first two are among the finest surviving textile mills in the country. No. 1 has the earliest known examples of slow-burning mill floor construction. Site also includes early 20th-century buildings formerly housing hydroelectric equipment, and head gates and raceway constructed in 1911. National Register of Historic Places.

33. WOONSOCKET RAILROAD STATION (1882-1883)
North Main and High Streets
Woonsocket, R.I.

Built on the site of the Providence and Woonsocket's 1847 station, this two-story brick building was rehabilitated in 1971-1972. Stone piers carrying elevated tracks north of the station were erected in 1847.

34. HARRIS WAREHOUSE (1855)
61 Railroad Street
Woonsocket, R.I.

This unique stone warehouse was built on a curve to accommodate railroad tracks. It was owned and used as a wool warehouse by the Harris Woolen Company, one of Woonsocket's largest 19th-century textile firms. National Register of Historic Places.

35. JENCKES MILLS (1822-1828)
96 Mill Street and 767 Social Street
Woonsocket, R.I.

Two stone mills, the earliest on Mill Street, surrounded by later additions, the 1828 mill is now much altered. The area, once known as Jenckesville, contains some workers houses at 752 and 842 Social Street, and the Jenckes Mansion at 837-839 Social Street. In 1896, the 1828 mill was occupied by the Guerin Spinning Company, founded by Joseph Guerin, a Belgian immigrant who was among the first to bring French textile technology to Woonsocket and likely the first to begin the experiment of French-speaking management.

SUGGESTIONS FOR FURTHER READING

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